

### REMARKS

At the outset, Applicants thank the Examiner for the thorough review and consideration of the subject application. The Non-Final Office Action of November 6, 2003 has been received and its contents carefully reviewed.

In the Office Action, the Examiner objected to the drawings, specifically stating that Figure 1 should be designated by a legend such as "Prior Art." Applicants respectfully submit, however, that Figure 1 is already designated as "Prior Art" and therefore request that the present objection to the drawings be withdrawn.

In the Office Action, the Examiner rejected claims 1-11 under 35 U.S.C. § 102(b) as allegedly being anticipated by Morgan (U.S. Patent No. 5,574,738). This rejection is respectfully traversed and reconsideration is requested.

Applicants submit that claim 1 is patentable over Morgan. Claim 1 recites, "an active region... a second mirror... wherein said second mirror includes an oxide insulating region... and wherein said oxide insulating region, said active region, and at least a portion of said second mirror include damage from implanted ions."

As the Examiner is well aware, a claim is anticipated *only* if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference, *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, the *identical* invention must be shown in as complete detail as is contained in the ... claim, *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

In rejecting claim 1, the Examiner states that Figures 1 and 4 of Morgan disclose all of the features in claim 1, including "an active region 22... a second mirror 26, and an oxide region 54." The specification of Morgan states that region 54 (shown in Figure 4) is an isolation layer "formed by, e.g., deep ion implantation." Region 29 (shown in Figure 1) is an isolation layer "formed by deep H<sup>+</sup> ion implantation." If these regions are formed by ion implantation, neither layer 54 or layer 29 is an oxide layer. The specification does go on to state that other

methods may be used to form these insulating layers (i.e., layers 29 and 54), though the specification does not expressly mention oxidation. However, if either of these layers are formed by oxidation, they no longer qualify as layers that have damage due to ion implantation. In summary, claim 1 requires not only an oxide layer, but an oxide layer that also has damage due to ion implantation. Morgan does not disclose this limitation; therefore, it cannot possibly anticipate claim 1, or claims 2-4 which depend from claim 1.

Independent claim 5 recites features that are substantially similar to those in claim 1. Accordingly, Applicants submit that Morgan does not anticipate independent claim 5, nor does it anticipate claims 6-11 which depend there from.

For at least the aforementioned reasons, the Applicants request that the Examiner withdraw the rejection of 1-11 under 35 U.S.C. § 102(b).

In the Office Action, the Examiner rejected claim 12 and 13 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morgan in view of related art Figure 1 of the present application. This rejection is respectfully traversed and reconsideration is requested.

Claims 12 and 13 depend from independent claim 5. As such, each includes all of the features set forth in claim 5, including an oxide insulating region and ion damage in, among other regions, the oxide insulating region. As stated, Morgan does not disclose an isolation or insulating region that is both an oxide layer and a layer that has damage due to ion implantation. Accordingly, even though Figure 1 of the present invention has a conduction layer 9, a cap layer 8 and an electrical contact 26, it does not, in combination with Morgan, disclose an insulating region that is both an oxide layer and damaged due to ion implantation. Claims 12 and 13 are, therefore, patentable over the combined teaching of Morgan and Figure 1 of the present invention. Thus, the Applicants kindly request that the Examiner withdraw this rejection.

In the Office Action, the Examiner rejected claims 14-25 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Morgan in view of related art Figure 1 of the present application. This rejection is respectfully traversed and reconsideration is requested.

In rejecting claims 14-25, it would appear the Examiner is contending that each of

these claims is inherently a product-by-process claim. The Examiner then states that because Morgan, in combination with Figure 1 of the present application, teaches the resulting product associated with claims 14-25, the methods defined by claims 14-25 are rendered obvious.

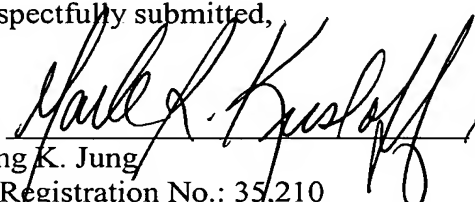
As stated above, Morgan, in combination with Figure 1 of the present application, does not disclose all of the product features, namely, an oxide insulating layer that also has damage due to ion implantation. Consequently, claims 14-25 are not rendered obvious by Morgan in view of Figure 1 of the present application, and the Applicants respectfully request that the Examiner withdraw this rejection.

For at least the reasons set forth above, Applicants respectfully contend that claims 1-25 are in condition for allowance. Notice of same is earnestly solicited. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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